



A U.S. Department of Defense Information Analysis Center (IAC) sponsored by the Defense Technical Information Center (DTIC)

## Dr. Prociv Speaks on the Continually Changing CB Landscape

By Nancy R. Brletich



Dr. Theodore Prociv was appointed to his current position by Secretary of Defense William Perry and assumed the role in April 1994. He reports directly to the Honorable Dr. Harold Smith, the Assistant to the Secretary of Defense. Dr. Prociv is responsible for the oversight of all chemical and biological defense programs within the Department of Defense and oversees an annual budget of \$1.5 billion dollars.

Dr. Theodore Prociv, Deputy Assistant to the Secretary of Defense (Chemical and Biological Matters) briefed a group of engineers and scientists at a recent American Defense Preparedness Association (ADPA) luncheon held at the Edgewood Area, APG Community Club. His presentation was entitled "Chem-Bio Defense Marketplace - Looking to the Future". The recurrent theme in Dr. Prociv's presentation was the continually changing landscape in CB defense. Amongst the points he mentioned were an increased Congressional interest in CB defense, progress made to date on Congressional initiatives, the

importance of counterproliferation as a national security issue and changes in command in key CB management positions.

"There has been an increased Congressional interest in CB defense", noted Dr. Prociv. Recent Congressional directives for CB defense are defined in two documents, the February 1993 Browder Report and Public Law 103-160 - the National Defense Authorization Act for FY 1994 (Title XVII). The Browder report calls for a strong CB defense program to be an integral part of national security while Public Law 103-160 calls for more detailed OSD oversight of CB defense programs, an increased emphasis in joint service programs, designation of the Army as the Executive Agent for CB defense, consolidated budgets at the defense level after 1995, submission of an annual report to Congress on CB defense matters and management of CB defense programs to follow the Defense Acquisition Board (DAB) process.

To date, extensive progress has been made towards implementing Public Law 103-160. First, the Army has been formally tasked as the Executive Agent for CB defense. Secondly, a new Joint Service Agreement (JSA) has been signed. Plans are currently underway to establish a Joint Service Integration Group (JSIG) and a Joint Service Material Group (JSMG). A consolidated CB defense Program Objectives Memorandum (POM) for FY 96-01 has been developed and approved. Also, the first annual report on the CB defense program was submitted to Congress in June 1994.

To accomplish the DoD Executive Agent review responsibilities for the Secretary of

the Army (SECARMY), the Army Vice Chief of Staff and the Army Acquisition Executive (or their designated representatives) will co-chair a Joint NBC Defense Board as the designated representatives of the SECARMY. The board will approve the joint requirements list; the Joint Service Modernization Plan; the Joint Research, Development and Acquisition Plan; the consolidated NBC defense POM; joint training and doctrine initiatives and the Joint NBC Logistics Support Plan. The Joint NBC Defense Board is the initial arbiter for service concerns.

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# ONGOING AND RECENT ACTIVITIES

## Information Operations

### User-Accessible Database (UDB)

• The focus of the document acquisitions this quarter was in the area of chemical weapons treaty verification technologies. Over 300 documents were added to the treaty collection during quarter 1, FY95.

### Products

• The Worldwide Chemical Detection Equipment Handbook will be available soon. Please see our insert. In order to qualify for the special pre-publication rate, orders must be postmarked on or before September 30, 1995.

• The CBIAC, in cooperation with Army Research Lab (ARL), is pleased to announce the Chemical Defense Materials Databook. Updated since its initial distribution at the 1994 NBC Contamination Survivability Symposium, the Databook is an abridged, paper version of the Chemical Defense Materials Database (CDMD). The Databook is designed to offer insight into the selection criteria for materials by providing the user with industrial guidelines for material selection, as well as insight into the problems with the data. The Databook is a handy quick reference to the important information found in the CDMD. To receive a copy or for more information please call the CBIAC.

• A draft version of the Chemical Weapons Treaty Technologies Reference Collection Bibliography and Index was submitted to the Defense Nuclear Agency for review. A final copy will be available in late January 1995. The Chemical Weapons Treaty Technologies Reference Collection Bibliography and Index serves as a resource for government agencies and other investigators interested in CW treaty verification technologies. It includes an extensive array of documents from national sources such as government research centers and laboratories, as well as documents from national and international sources such as treaty organizations, universities, foundations, private industry, and the open literature. This bibliography and index is a dynamic document. Updates and additions will continue to be added as documents are identified and/or acquired. This version of

the Bibliography and Index supersedes the December 1991 edition.

• The CBIAC is now available on Internet through the World Wide Web (WWW) at: <http://www.dtic.dla.mil/iac/>. Included on the web is the CBIAC's newsletter, products, services and general information that is now accessible to the CB community and general public. There will be the capability for users to register and order products from the CBIAC by using interactive forms. This task was sponsored by the Defense Technical Information Center (DTIC).

### Technical Area Tasks (TATs)

• Old Contract: Since the last Newsletter, 11 TATs have been awarded, effort was added to 16 ongoing tasks, and 14 TATs were completed. As of 30 November, 329 TATs have been awarded, work has been added to 164, and 275 have been completed. Total value of our TATs is approximately \$49.6 million.

• New Contract: Under the recently awarded CBIAC recompile contract, 6 new TAT's with a value of 1.1 million dollars have been awarded.

• Do not hesitate to contact Judi Shetterly at the CBIAC (410) 676-9030 if you would like further information on a CBIAC TAT. In order for us to help you most efficiently, please furnish the Government contract number you are working on (if any), the reason(s) you want the information and your company address and phone number. We need this information in order to obtain release of information from the TAT sponsor.

### Completed:

Task	Description/Sponsor
232	Continue the Development of the USAF Materials Database by Adding Information on the Effects

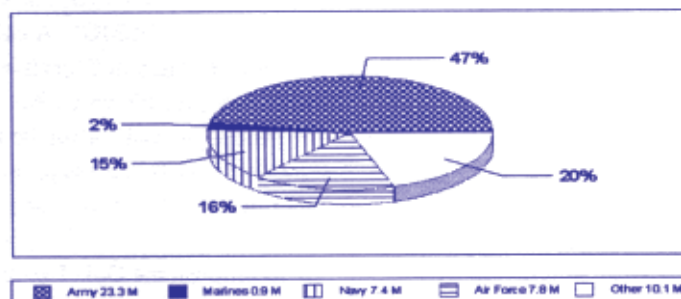
of CW Agents, Simulants and Decontaminants  
USA/CBDCOM

353	Provide Technical and Analytical support to the USN CBRD RDT&E Program. USN/NAVSEA
356	Locate, Acquire and Enter CBW Materials Data into the DoD Materials Database. USA/CBDCOM
388	Evaluate and Document Programs Contained in the ERDEC Computerized Aerosol Library. USA/CRDEC
414	Identify, Compile, Analyze and Organize Information on Worldwide NBC Detection Equipment into a Handbook. USA/ERDEC
427	Review and Analyze Government Aerosol and Obscurant Research Data and Documentation. Assemble Information into Documents USA/ERDEC
446	Evaluate the Maintainability and Reliability of the MICAD 6.3b Demonstration and Validation Phase System. USA/ERDEC
430	Provide Technical Support to NBCCS Workshops and Meetings. USA/ARL
448	Evaluate the Effectiveness of the USAF Air Crew Eye/Respiratory Protection System. USAF/HSC

See Ongoing and Recent Activities

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TECHNICAL AREA TASK AWARDS  
(Millions)



**The 70 million dollar contract to continue operation of the Chemical Biological Information Analysis Center (CBIAC) was awarded to Battelle Memorial Institute on October 30, 1994.**

During the three year contract (with an additional two year option), the CBIAC will continue to play a significant role in the DoD's Chemical Warfare/Chemical Biological Defense program. During the previous CBIAC contract, August 1986 through September 1994, CBIAC conducted \$50 million of work for more than 50 government agencies.

The CBIAC win, consists of a core program funded by the Defense Technical Information Center (DTIC) to collect, analyze, and disseminate Chemical/Biological (CB) related information; and Technical Area Tasks. These tasks are individual delivery orders that can cover any area of the CBIAC scope and are funded by the requestor.

The CBIAC's scope covers all facets of CB, from chemical and physical properties of military compounds; to environmental effects; medical effects and treatment; toxicology; combat effectiveness; and treaty verification.

A popular feature of the CBIAC continues to be the inquiry service. This is because CBIAC provides one-stop shopping and functions as a non-prejudicial information source for government and contractor clients. During the initial contract, CBIAC staff answered over 5,600 inquiries.

The Director of the CBIAC is James J. McNeely. Mr. Fran Crimmins manages CBIAC TATs. Nancy R. Brletich is the Deputy Director of the CBIAC, as well as manager of Information Dissemination. Information Systems support is provided by Mr. Donald B. McGonigle; Information Collection and Processing is managed by Jennifer L. Shusko; Cataloging, Indexing, Abstracting, and Input to DROLS is managed by Jeanne M. Rosser, and the Inquiry and Referral Service is managed by Steven E. Jones. Other CBIAC staff members include Judith M. Shetterly, Barbara A. Claunch, Elizabeth L. Hamm and Mary Jo Waters. The CBIAC staff looks forward to providing continued service to the CB community.

## INTERNATIONAL CB NEWS

### Source of '79 Anthrax Deaths in Russia Confirmed

A group of Russian and American scientists reported that the deadly outbreak of anthrax which took place in Urals of Sverdlovsk in 1979 was attributed to "the windborne spread of an aerosol of anthrax pathogen and that the source of the pathogen was the military microbiology facility" located in Sverdlovsk, according to the November 18 edition of The New York Times. Ninety-six cases of anthrax poisoning were reported in official records with a total of sixty-six deaths. This finally puts the argument about the source of the outbreak to rest according to Dr. Matthew Meselson, Harvard molecular biologist and expert on chemical and biological warfare who led the scientific team. The team of scientists was able to create a detailed map proving that the anthrax cases occurred in a narrow oval pattern downwind from the Sverdlovsk military facility and in villages southeast of the city rather than a scattered pattern. Most of the victims could be traced to areas covered by the plume cloud on April 1, 1979, the day the aerosol was released. The researchers estimated that the amount of anthrax spores released was less than one gram and possibly less than a few milligrams.

### Come To DTIC For The Answers To Your Needs

By Ms. Denise Mahalek  
Program Analyst, Defense Technical  
Information Center

The Defense Technical Information Center (DTIC) is a provider of scientific, technical, and engineering information services to U.S. Government agencies, their contractors, subcontractors, and potential contractors. DTIC plays an important role in managing this information for their user community and has the expertise to handle the most complex requests.

Through an impressive collection of products and services, DTIC has become the most complete source of Defense-related information in the United States. From easy-to-use online systems to print and nonprint products, DTIC has something for virtually every organization. Designed to meet all budgets and research needs, DTIC's products and services come in many formats, cover all subject areas of interest to DoD, are timely, and inexpensive! Here's just a sample of what they can offer you:

### DTIC Online Services

- **Defense Research, Development, Test & Evaluation Online System (DROLS)** provides online access to DTIC's three databases (Technical Report (TR) Bibliographic Database, Research and Technology (R&T) Work Unit Information System, and Independent Research & Development (IR&D) Database). The user's personal computer is linked to DTIC's central computer system for easy, up-to-date access to DROLS or a user may request DTIC's Reference and Retrieval staff to do the search for them.

- **Technical Report (TR) Bibliographic Database** is a collection of nearly 2 million bibliographic records and abstracts of completed print and nonprint products submitted to DTIC, such as technical reports, DoD patent applications, conference papers, theses, software, data files, databases, and videos. Classified, limited and unclassified reports are available to qualified users.

- **Research & Technology (R&T) Work Unit Information System (WUIS)** is a collection of ongoing DoD research and technology efforts at the work unit level submitted to DTIC. WUIS answers the questions of what, where, when, how, at what cost, and by whom research is being performed. This database also includes NASA efforts.

**See Come to DTIC for the Answers to Your Needs**

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## RECENT ACQUISITIONS

### **Non-Conventional Weapons Proliferation in the Middle East. Tackling the Spread of Nuclear, Chemical, and Biological Capabilities.**

This book is a compilation of papers by leading world experts, edited by Efraim Karsh, Martin S. Navias, and Philip Sabin, on all aspects of the proliferation of non-conventional weapons. The proliferation of non-conventional weapons such as ballistic missiles and chemical weapons is assessed for the post-Gulf War period. The papers presented in this publication originated at a conference held by the Department of War Studies at King's College London in November 1991. The authors are international experts in the areas of Middle Eastern security and proliferation from the United States, United Kingdom and the Middle East. The papers in this collection are divided into four parts: Historical Experience; Proliferation: Progress and Prospects; Strategic and Political Implications; and Arms Control. Published in 1993, this book is available from Oxford University Press, New York (ISBN 0-19-827768-7).

### **Verification under the Chemical Weapons Convention: On-Site Inspection in Chemical Industry Facilities. SIPRI Chemical and Biological Warfare Study 14.**

This Stockholm International Peace Research Institute (SIPRI) study, by Ralf Trapp, examines technical aspects and methodologies for verification of the non-production of chemical weapons in the chemical industry under the Chemical Weapons Convention (CWC). The basis for this study is found in the final text of the CWC and from practical experience and lessons learned in the National Trial Inspections (NTIs). The study contains acronyms and abbreviations commonly used in CWC references. A glossary of terms related

to the CWC, and specifically, to the verification of industrial facilities is included. The study is divided into five chapters. An introduction and summary, and specific chapters on routine verification in the chemical industry, challenge inspections in the chemical industry, and the effectiveness of verification. Published in 1993, this study is available from Oxford University Press, New York (ISBN 0-19-829160-4).

### **Control of Dual-Threat Agents: The Vaccines for Peace Programme. SIPRI Chemical and Biological Warfare Study 15.**

This Stockholm International Peace Research Institute (SIPRI) study, edited by Erhard Geissler and John P. Woodall, provides a compilation of papers presented at a meeting on Vaccines For Peace (VFP) held in Biesenthal near Berlin, Germany on 9-14 September 1992. This meeting was organized by the Max Delbrück Centre for Molecular Medicine (MDC), Berlin-Buch and SIPRI with support from the Volkswagen Foundation. The papers presented were revised to reflect the results of discussions on the VFP proposal and are intended for further consideration by the community involved in biological defense, health protection, conversion, prevention of proliferation, international peaceful cooperation and vaccine research, development and use. This study is divided into seven parts containing an introduction, final discussion and annexes, as well as specialty sections covering Strengthening the Biological Weapons Convention, Vaccine R&D and Production, Public Health and Biological Defence, and International Programmes for Prevention of Disease. Published in 1994, this study is available from Oxford University Press, New York (ISBN 0-19-829172-8).

### **Constraining Proliferation: The Contribution of Verification Synergies. Arms Control Verification Study 5.**

In this study, by Patricia Bliss McFate, Sidney

N. Graybeal, George Lindsey, and D. Marc Kilgour, the effects of verification "synergies" are identified using specific arms control examples. Synergies are defined as "the combinative effects arising between verification methods and techniques, between agreements or regimes, between implementing mechanisms and forums, between organizations and agencies within a country, between countries party to an agreement, and various combinations of these items." Three forms of verification are considered here: cooperative, adversarial, and coercive. These forms are exemplified by the Conventional Forces in Europe (CFE) Treaty, the Chemical Weapons Convention (CWC), and the UNSCOM inspections in Iraq after the Gulf War, respectively. A list of arms control abbreviations is provided. The paper contains sections on constraining proliferation, adversarial and coercive verification, synergistic effects, and the impact of verification synergies on treaty regimes. Published in March 1993, this study is available from Department of External Affairs and International Trade, Ottawa (Ontario), Canada (ISBN 0-662-20347-X).

## To Place an Ad in CBIAC News...

The CBIAC is now accepting paid advertisements from the chemical and biological defense community. Our general policy is to include ads pertaining to scientific and engineering equipment and services and other commodities generally related to the mission and scope of the CBIAC. All advertisements are subject to approval by our COTR before being printed. If you would like to run an ad, please contact Judi Shetterly for additional information on price and policy.

## TAT FOCUS

### Biorefractometer Biosensor as a Biological Agent Detection System

Battelle has reached another milestone in the development of the Biorefractometer biosensor for military use under CBIAC TAT 380 for the U.S. Navy. Battelle invented the Biorefractometer in 1990 using internal investment funding. The early goal was to develop a clinical instrument for hospital or doctor's office use for the real-time analysis of proteins in blood, urine or other human liquids. During Operation Desert Shield and Storm, the potential applicability to military environmental detection requirements was quickly realized. The Biorefractometer biosensor recently demonstrated the detection of Plague F1 and SEB to less than 100 pg/ml in five minutes. This level of performance is on par with other leading candidate technologies being applied for commercial and/or military use.

Battelle has continued to invest internal funds to augment funding from the Navy and the Army over the past few years. Navy efforts have supported developments to improve sensitivity and determine the feasibility of multiple analyte detection. Based on early successes, the Navy, through the Naval Medical Research Institute, signed a Cooperative Research and Development Agreement (CRADA) in 1994 with Battelle to support the program by providing necessary antibodies and antigens for BW agents, independently evaluating its performance and providing user suggestions for improving the design. Army efforts have supported development of interchangeable sensors and enhanced optics. The sum of results from all these efforts support further improvements in the near future, says Battelle researcher and inventor Tony Boiarski.

Additional features of the device include:

- A unique method of sensing and measuring antibody-antigen

reaction which leads to a highly selective detection process and minimal false response.

- Demonstrated potential for simultaneously measuring multiple agents of interest in seconds to minutes.
- Detection based on a continuous flow tag-free approach which simplifies device operations and minimizes logistics.

Future plans include delivering beta version(s) to service sponsors for application and evaluation of advanced chemistries, and continued systems engineering. In addition, the U.S. Air Force and U.S. Marine Corps have expressed interest in developments which may make this effort truly joint. Dual-use, commercial applications are continuing to be evaluated..

For additional information contact Ken Tourison, Battelle Crystal City Operations, Arlington, VA, (703) 413-8866 or facsimile (703) 413-8880.

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### Dr. Prociv Speaks on the Continually Changing CB Landscape

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The JSIG and JSMG will be formed by the Department of the Army in order to accomplish the Executive Agent coordination and integration responsibilities for DoD. The JSIG has the missions to coordinate and integrate the Services' NBC defense requirements (develop the joint requirements list, joint priority list and Joint Service Modernization Plan; recommend joint programs; review Service POMs; and review — and when necessary— coordinate Service NBC Mission Needs Statements and Operational Requirements Documents, and review NBC training and doctrine initiatives. The JSMG has the mission to coordinate and integrate the Services' NBC science and technology, NBC research, development and acquisition (develop the joint RDA Plan), NBC logistics sustainment

for the Services; conduct NBC logistics requirements planning for all Services (develop a Joint Logistics Support Plan); and review arms control, chemical demilitarization and non-stockpile RDA and science and technology programs for possible NBC defense applications.

Another area that Dr. Prociv discussed in his briefing was DoD's counterproliferation initiative. "Counterproliferation has become a significant buzzword", according to Dr. Prociv. The term refers to stopping the opponent before they strike or "proliferation prevention". Dr. Prociv referred to the Office of the Deputy Secretary of Defense May 1994 report to Congress entitled Nonproliferation and Counterproliferation Activities and Programs which highlights sixteen priority areas for additional investment.

Dr. Prociv also spoke of several changes in key CB management positions. BG Walter L. Busbee has taken over command of the Joint Program Office (JPO) for Bio Defense (BD), a position formerly held by BG Ralph Wooten. The JPO-BD is responsible for the vaccine production program and biodetection programs. BG Busbee previously held the position of Director, U.S. Army Chemical Demilitarization and Remediation Activity (CDRA). Replacing BG Busbee as Director, CDRA, is Colonel Coverstone whose most recent assignment was at the Pentagon. The Director of CDRA manages and defines the stockpile and non-stockpile disposal programs through existing Program Managers as well as serves as the Deputy Commander of the U.S. Army Chemical and Biological Defense Command (CBDCOM). BG Ralph Wooten has been appointed Commandant of the U.S. Army Chemical School located in Fort McClellan, AL. He will be taking over for MG Robert Orton, who is retiring.

Dr. Prociv concluded his presentation on the changing CB defense landscape with some thoughts on what is needed in the future. Among the points mentioned were continuing implementation of Public Law 103-160, continued Congressional support and resolution of industrial base problems.

## CB NEWS EXCERPTS

In order for the CBIAC to inform its' readers of recent Chemical/Biological Defense activity throughout the United States and around the world we have compiled a list of related CB news/magazine articles and have taken excerpts from them to create brief overviews. Please note that the CBIAC does not provide secondary distribution of articles; but, we can provide direction on where to find an article of interest.

"Legislative Update - Chemical Weapons Convention Ratification Delayed," Chemical Demilitarization Update. 1994 October;3(2):2. Congressional concerns will delay Senate ratification of the Chemical Weapons Convention (CWC).

Sperling, Michael. "Special Ops Chief is Bullish on CV-22 Project," Defense News. 1994 24-30 October:34. Army General Wayne Downing, chief of U.S. Special Operations Command, anticipates the special operations version of the V-22 tiltrotor aircraft will proceed despite a \$115 million funding shortfall.

Hitchens, Theresa. "Russian Moves May Delay Accord," Defense News. 1994 24-30 October:34. U.S. Senate approval of the 1992 Chemical Weapons Convention is being delayed, in part, due to Russia's noncompliance with current chemical and biological weapons treaties, according to Capitol Hill sources.

Hitchens, Theresa. "Obstacles Stall Biological Weapon Vaccines," Defense News. 1994 17-23 October:18. The U.S. Defense Department's effort to create a new facility for producing vaccines against potential biological weapons has run into a series of roadblocks that are expected to delay the program at least a year.

Ember, Lois. "Sick Gulf Vets Get Aid; Chemical Arms Link Probed," Chemical & Engineering News. 1994 October 24:22. A bill authorizing the Department of Veterans Affairs (VA) to compensate Persian Gulf War Veterans for mysterious ills that physicians have been unable to

diagnose was approved in the waning hours of the 103rd Congress.

Waller, Michael J. "Russia's Poisonous Secret," Reader's Digest. 1994 October:9-12. Russian production and testing of chemical weapons was revealed by Vil Mirzayanov when he blew the whistle on a violation of the Bilateral Destruction Agreement between the U.S. and the U.S.S.R. Mirzayanov quit the Communist Party and wrote an expose of Russia's shadowy chemical weapons industry.

Glashow, Jason. "Army Pushes Biological Weapon Defense," Defense News. 1994 September 12-18:26. In an effort to rapidly field a technology to combat potential biological weapons threats, U.S. Army officials will begin operational testing in October '94 on the Biological Integrated Detection System (BIDS).

Denny, Sharon. "Industry Teams Battle to Provide State-of-the-Art Soldier," Defense News. 1994 August 29 - September 4:36. A team led by Litton Data Systems in Moorpark, CA is competing with a team led by Motorola's Government Systems and Technology Group in Scottsdale, AZ to develop and demonstrate a complete battlefield ensemble for U.S. Army Soldiers.

Holzer, Robert and Theresa Hitchens. "Pentagon Slows Counterproliferation Efforts," Defense News. 1994 August 29 - September 4:8. U.S. military leaders have agreed to budget \$80 million in new funds for counterproliferation projects in 1996, significantly less than the target of \$300 million per year set by the Pentagon's civilian leadership.

Hitchens, Theresa and Charles Miller. "Biological Accord Draws Fire," Defense News. 1994 August 29 - September 4:8. The United States and several NATO allies are urging member countries of the 135-nation Biological Weapons Convention to strengthen the 1972 accord.

"Chemical Weapons Treaty—Congress Gets Implementing Legislation," Chemical & Engineering News. 1994 June 20:6. The Arms Control & Disarmament Agency (ACDA) has sent Congress draft legislation to implement the chemical weapons treaty.

"Chemical Weapons Convention: A Bad

Treaty," The Washington Post. 1994 August 4. Cold War debates established useful standards for Senate approval of any arms-control treaty.

Gaffney, Frank Jr. "Chemical Weapons Treaty or Travesty?" The Washington Times. 1994 August 11:A18. The Senate Armed Services committee is scheduled to take testimony from senior representatives of the Department of Defense concerning a fatally flawed arms control agreement.

"USAMRIID's Medical Research in Biological Defense and Infectious Diseases," U.S. Army Medical Research Institute of Infectious Diseases. 1994 October;1(1):1. The threat of biological warfare confronting U.S. forces in future conflicts has resulted in the creation of product-oriented, Department of Defense-directed, Medical Biological Defense Research Program (BDRP) for development of effective countermeasures to specific threats.

Bailey, Kathleen. "Chemical Weapons Bans All Glitter, No Gold," The Washington Post. 1994 August 12. An overview of Michael Krepon's argument on the Senate ratifying the chemical weapons treaty [op-ed; July 24].

Webber, Fred. "Pass the Chemical Weapons Pact," Journal of Commerce. 1994 September 7. Critics mount assault on the Senate vote to ratify a United Nations treaty to ban chemical weapons.

Palmer, Elizabeth A. "For Businesses, a High Price for Chemical Weapons Ban," CQ. 1994 September 17. If the Senate ratifies the Chemical Weapons Convention, 154-nation accord concluded in 1993 there may be serious implications for many U.S. businesses because the accord would require the companies to report annually on a variety of chemicals they use to make products.

Sheheane, Mike. "Chemical Weapons Treaty Training," CML. 1994 July. The U.S. Army Chemical School's involvement in a September 1991 effort has grown into what is now a new and exciting mission. The School was asked to evaluate a proposed training program for personnel assigned to the On-Site Inspection Agency (OSIA).



## CONTRACT AWARDS

1. **Processing and Gas Chromatographic Analysis of VOC Samples**  
D400531M1/68D40105  
**Biospherics Research Corp.**  
1121 N.W. Donelson St.  
Hillsboro, OR 97124 (306)  
\$143,500. 9 November 1994
2. **Suit, Chemical and Biological Protective**  
SP0100-94-C-0349  
**Creative Apparel Associates**  
RT 3, P O Box 208  
Belfast Me 04915 (0277)  
\$17,902,212. 7 October 1994
3. **Chemical Detector Unit**  
SP0440-94-C-1672/  
SP0440-94-R-2325  
**Wing Corp.**  
215 Highland Ave  
Westmont NJ 08108-2699  
(0285)  
\$27,703. 14 October 1994

### Editorials Welcomed!

If you would like to submit an editorial for publication in our next issue of the CBIAC Newsletter, please contact the Newsletter Editor, Jennifer Shusko, at the CBIAC. For those interested in submitting editorials, we ask that you provide us with an electronic copy as well as a hard copy of your editorial.

## Come to DTIC

Continued from page 3

- **Independent Research and Development (IR&D) Database** contains descriptions of research and development efforts currently performed by U.S. Government contractors. Access is limited to DoD personnel and other federal agencies with the approval of DoD. Online access to this proprietary data can only be accommodated through the use of a classified terminal or via a STU-III.

- **Department of Defense Gateway Information System (DGIS)** offers convenient access to over 1,000 commercial and governmental databases. DGIS is a key component in DTIC's efforts to provide the Defense community with access to vital information. You also get instant access to the Internet at no additional cost!

- **Current Awareness Products** give you automatic access to core Department of Defense research and development efforts at a very low price.

- **Automatic Document Distribution (ADD) Program** provides bimonthly automatic distribution of microfiche copies of newly accessioned scientific and technical reports in accordance with a user defined profile. The Automatic Hardcopy Document Distribution (AHDD) Program offers this same service in paper copy format.

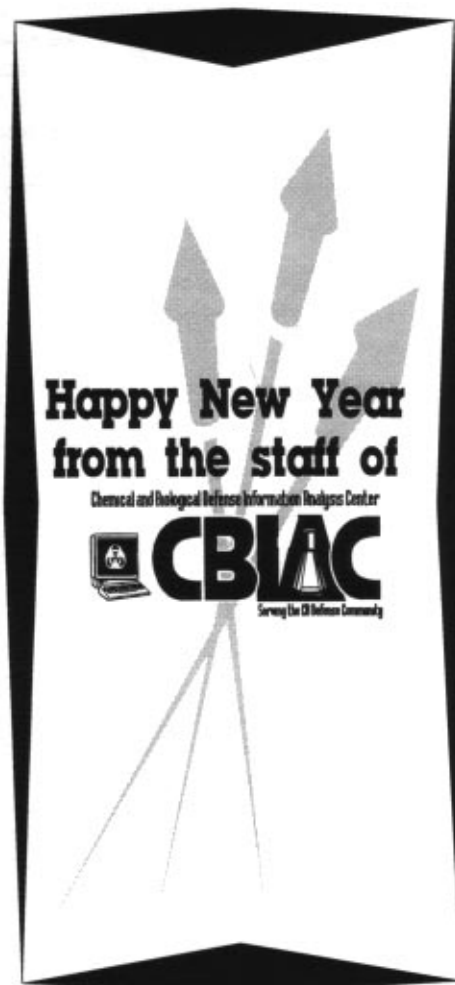
- **Current Awareness Bibliography (CAB) Program** is a customized, automated subscription bibliographic service based on a user's subject needs. The user's subject interest profile is matched against newly acquired accessions in the TR Bibliographic Database. The end product is a technical report bibliography sent to the user on a semi-monthly basis.

- **Recurring Reports Program** matches a user's profile against newly acquired information in the WUIS or IR&D databases. It can be supplied monthly, quarterly, semi-annually, or annually, according to user preference. The end product contains management summaries which match a

user's interests. Information included depends on the summary format selected.

- **Technical Report Database on CD-ROM** is a subscription product containing nearly 700,000 unclassified citations taken from the TR Bibliographic Database, which were entered into DTIC's collection from January 1970 to the present. Each quarterly update includes citations to an additional 3 months of newly acquired material. Users have convenient access to technical report citations at their personal computers.

DTIC customer support staff is available to serve your needs. For information on registering with DTIC or for additional information on their products and services, please contact the Product Management Branch at (703) 274-6434 or DSN 284-6434, or write to the Defense Technical Information Center, DTIC-BCP, Building 5, Cameron Station, Alexandria, Virginia 22304-6145. Make the most of every dollar and opportunity. Call DTIC today and tell them what you need! They are here to serve you.



## CALENDAR OF EVENTS

The CBIAC highlights conferences, symposia, meetings, exhibitions and workshops of interest to the CB community in every issue of our newsletter. We invite CBIAC users to submit information on various events to the attention of Nancy Brletich, CBIAC Deputy Director. She may be reached at the address, phone and fax numbers on the front page of this newsletter, or via the internet: [brletich@battelle.org](mailto:brletich@battelle.org). Due to space limitations, the CBIAC will accept submissions on a first-come, first-served basis and reserves the right to reject submissions.

### 1995 MEETINGS

Date/Name/Location	Contact(s)	Date/Name/Location	Contact(s)
<b>Jan 22-25, 1995</b>		<b>Mar 19-23, 1995</b>	
Third International Conference on On-site Analysis...the lab comes to the field	InfoScience Services, Inc. Tel. (708) 291-9161 Fax: (708) 291-0097	IDEX 95 International Defence Exhibition	The Military Committee for International Defence Exhibitions P.O. Box 27426, Abu Dhabi United Arab Emirates Tel: 971 2 324744/347753 Fax: 971 2 347299
Del Largo Resort and Conference Center Houston (Montgomery), TX		Abu Dhabi International Exhibition Centre United Arab Emirates	
<b>Jan 23-25, 1995</b>		<b>Mar 29-30, 1995 (Tentative)</b>	
AUSA 7th Annual Winter Symposium & Exposition	Association of the United States Army (AUSA) 2425 Wilson Blvd. Arlington, VA 22201 Tel: (703) 841-4300, Ext. 660 Fax: (703) 252-9039	Chemical Demilitarization APBI	American Defense Preparedness Association (ADPA) 2101 Wilson Blvd., Suite 400 Arlington, VA 22201-3061 Tel: (703) 522-1820 Fax: (703) 522-1885
Twin Towers Hotel and Conference Center Orlando, FL		Edgewood Conference Center Aberdeen, MD	
<b>Jan 30-31, 1995</b>		<b>Mar 30-31, 1995</b>	
Tactical Vehicles	American Defense Preparedness Association (ADPA) 2101 Wilson Blvd., Suite 400 Arlington, VA 22201-3061 Tel: (703) 522-1820 Fax: (703) 522-1885	New Frontiers in Arms Control	CISSM, School of Public Affairs University of Maryland Attn: Ivo H. Daalder College Park, MD 20742-1811 Fax: (310) 403-8107 Email: CISSM1@puafmail.umd.edu
Monterey, CA		University of Maryland College Park, MD	
<b>Jan 31-Feb 3, 1995</b>		<b>Apr 5-8, 1995</b>	
11th Annual Test & Evaluation Symposium & Exhibition	American Defense Preparedness Association (ADPA) 2101 Wilson Blvd., Suite 400 Arlington, VA 22201-3061 Tel: (703) 522-1820 Fax: (703) 522-1885	Defence Asia '95 - 5th International Defence Equipment Exhibition and Conference	CEMS 1 Maritime Sq. #09-43 World Trade Centre Lobby B, Singapore 0409 Tel: 65 278 8666 Fax: 65 278 4055 Telex RS 35319 CEMS
Stouffer Hotel Austin, TX		Singapore International Convention and Exhibition Centre, Exhibition Hall 1 Singapore	
<b>Feb 7, 1995</b>		<b>Apr 11-12, 1995</b>	
Implementing the Chemical Weapons Convention: The Nuts and Bolts of Compliance	ABA Section of Natural Resources, Energy, and Environmental Law Attn: Mike Winkler, Program Asst. 750 North Lake Shore Drive Chicago, IL 60611 Fax: (312) 988-5572	Enhanced Land Warrior	American Defense Preparedness Association (ADPA) 2101 Wilson Blvd., Suite 400 Arlington, VA 22201-3061 Tel: (703) 522-1820 Fax: (703) 522-1885
The Capital Hilton Hotel Washington, DC		Orlando, FL	
<b>Mar 5-10, 1995</b>		<b>Apr 18-20, 1995</b>	
Pittcon '95	The Pittsburgh Conference 300 Penn Center Blvd., Suite 332 Pittsburgh, PA 15235-5503 Tel: (412) 825-3220 or (800) 825-3221 Fax: (412) 825-3224	AUSA: Annual Special Operations Symposium and Exhibition	Association of the United States Army (AUSA) 2425 Wilson Blvd. Arlington, VA 22201 Tel: (703) 841-4300, Ext. 660 Fax: (703) 252-9039
Ernest N. Morial Convention Center New Orleans, LA		Pinehurst, NC	
<b>Mar 7-9, 1995</b>		<b>Apr 18-20, 1995</b>	
9th International Simulant Workshop	Battelle/Chemical and Biological Defense Information Analysis Center (CBIAC) Ms. Janice Rhodes, Workshop Coord. 2113 Emmorton Park Rd. Suite 200 Edgewood, MD 21040 Tel: (410) 676-0200 Fax: (410) 676-8662	21st Environmental Symposium & Exhibition "Environmental Protection and a Changing Defense Mission - A Mid-Decade View"	American Defense Preparedness Association (ADPA) Maureen O'Malley or Terri Colvin 2101 Wilson Blvd., Suite 400 Tel: (703) 247-2572/2571 Fax: (703) 522-1885
CBDCOM Conference Center Aberdeen Proving Ground, MD		San Diego Convention Center San Diego	



Date/Name/Location	Contact(s)	Date/Name/Location	Contact(s)
<b>Apr 25-27, 1995</b>		<b>Sept 4-8, 1995</b>	
International Training and Equipment Conference and Exhibition - ITEC '95	ITEC Nelson Jackson Two Colonial Place Suite 400, 2101 Wilson Blvd. Arlington, VA 22201-3061 Tel: (703) 522-1820 Fax: (703) 522-1885	Royal Navy and British Army Exhibition	Defence Export Services Organisation MDS 3 Exhibitions Room G01 Stuart House Soho Square London, UK Tel: 44 71 305 4468 Fax: 44 71 305 4441
Netherlands Congress Centre, The Hague		Aldershot, UK	
<b>May, 1995</b>		<b>Sept 20-23, 1995</b>	
Comdef '95	IDEEA Inc. 6233 Nelway Drive McLean, VA 22101-3141 Tel: (703) 760-0762 Fax: (703) 760-0764	IDEF '95 2nd International Defence Industry and Civil Aviation Fair	Tüyap Fairs and Exhibitions Organization, Inc. Tel: 90 0212 211 67 04 Fax: 90 0212 267 16 81
Arlington, VA		Etimesgut - Turkusu Turkish Air League Airport Facilities Ankara, Turkey	
<b>May 15-18, 1995</b>		<b>Oct 16-18, 1995</b>	
1995 Global Demilitarization Symposium & Exhibition	American Defense Preparedness Association (ADPA) Maureen O'Malley 2101 Wilson Blvd., Suite 400 Arlington, VA 22201-3061 Tel: (703) 247-2572/2571 Fax: (703) 522-1885	Association of the United States Army Exhibition	AUSA 2425 Wilson Blvd. Arlington, VA 22201 Tel: (703) 841-4300, Ext. 660 Fax (703) 252-9039
Stouffer Concourse Hotel St. Louis, MO		Washington, DC	
<b>June 6-8, 1994</b>		<b>Oct 31 - Nov. 3, 1995</b>	
63rd MORS Symposium	Military Operations Research Society, Inc. (MORS) 101 S. Whiting Street, #202 Alexandria, VA 22304-3483 Tel: (703) 751-7290 Fax: (703) 751-8171 Email:rwiles@dgis.dtic.dla.mil	COPEX UK	COPEX International Ltd. 33 A Church Road Watford, Herts, WD1 3PY United Kingdom Tel: 44 923 819 301 Fax: 44 923 818 927 Compuserve 100010,3545
United States Naval Academy Annapolis, MD		Sandown Exhibition Center Esher, Surrey, UK	
<b>Jun 6-9, 1995</b>		<b>1996 MEETINGS</b>	
3rd Annual Symposium on Atomic Force Microscopy and Scanning Tunneling Microscopy	U.S. Army Natick RD&E Center Samuel Cohen or Mona Bray Natick, MA 01760-5020 Tel: (508) 651-4578 (Cohen) (508) 651-4705 (Bray) Fax: (508) 651-5104	<b>Jan TBD, 1996</b>	
U.S. Army Natick Research, Development & Engineering Center Natick, MA		AUSA 8th Annual Winter Exposition	Association of the United States Army (AUSA) 2425 Wilson Blvd. Arlington, VA 22201 Tel: (703) 841-4300, Ext 660 Fax: (703) 252-9039
<b>Jun 11-16, 1995</b>		<b>June 24-29, 1996</b>	
The Fifth International Symposium on Protection Against Chemical and Biological Warfare Agents	CBW Protection Symposium FOA NBC Defence S-901 82 Umeå Sweden Tel: 46 90 106602 Fax: 46 90 106801	Eurosatory '96 Land Defence Equipment	GICAT Comissariat Générale Eurosatory 64 rue Ranelagh 75016 Paris France Tel: 33 1 42 30 71 11 Fax: 33 1 42 30 70 88
Stockholm, Sweden		Paris-Le Bourget, France	
<b>Jun 19-22, 1995</b>			
DNA's 4th Annual International Conference on Controlling Arms	Center for Verification Research Richard S. Soll or Elizabeth A. Loughney 8500 Cinder Bed Road IP.O. Box 1148 Newington, VA 22122 Tel: (703) 550-6801/5424 Fax: (703) 550-1986		
Wyndham Franklin Plaza Hote Philadelphia, PA			

## Technology Transfer

This column will serve the CB community by showcasing new technologies, by communicating industry needs and by providing sources of additional technology transfer information. The CBIAC Newsletter invites written submissions from its' readers for this column in upcoming newsletters. Please submit copy to attention of Mr. Don McGonigle.

If government efforts provide more business opportunities to industry then technology transfer has occurred. Technology transfer could begin as a discussion with Government personnel or become a Cooperative Research and Development Agreement with a military equipment developer.

However, since taxpayers seek benefits from the expenditure of public funds the Government needs to present legitimate products/programs to the civilian sector, or various Government programs face the possibility of being eliminated.

In order for industry to exploit the Government's technology there must be an effective way to showcase technologies and capabilities to the commercial sector, and to identify the needs and problems arising in industry.

National Technology Transfer Conferences like the Technology 2004 conference at the Washington Convention Center in Washington, DC in November of 1994 allow hundreds of exhibitors and attendees from the Government and civilian sector alike to exchange information and share their ideas. Newsletters, periodicals and various technology transfer sources including the Federal Laboratory Consortium (FLC); National Technology Transfer Center (NTTC); NASA; DOE; and Military R&D encourage the exchange of information between industry and government. There are also several searchable and free databases available on the Internet pertaining to technology transfer.

## Recent CB Publications

Binenfeld, Zlatko. "Production of Chemical Weapons by the Former Yugoslav Army (JNA) at the Military Technical Institute: Mostar," The ASA Newsletter, April 7, 1994, pp. 6-7.

Carrico, John P. "The DoD Chemical-Biological Defense Stand-Off Detection Program - A Revisit Nearly Ten Years Later," paper presented at the Third Workshop on Stand-Off Detection for Chemical and Biological Defense, 17-21 October 1994.

Jezek, Bruce and Grotke, Mark L., "Biological Detection Systems," paper presented at the Third Workshop on Stand-Off Detection for Chemical and Biological Defense, 17-21 October 1994.

"Prospects for Cooperation with U.S. in Defense Conversion," JPRS Report: Arms Control, December 16, 1993, pp. 4-6.

Sutherland, R. G. "The Chemical Weapons Convention: The Problems of Implementation," Pacific Research, Vol. 7, No. 1, February 1994, pp. 1-2.

Tucker, Jonathan B. "Lessons of Iraq's Biological Warfare Programme," Arms Control: Contemporary Security Policy, Vol. 14, No. 3, December 1993, pp. 229-271.

Wadha, Anil. "The Preparatory Phase of Setting Up the Organization for the Prohibition of Chemical Weapons," Disarmament: A Periodic Review by the United Nations, Vol. 16, No. 3, 1993, pp. 141-155.

Wright, B. W., Wright, C. W. "Feasibility of Large-Volume Air Sampling for Monitoring Noncompliance of the Chemical Weapons Convention," U.S. Air Force Technical Applications Center, Patrick AFB, FL, 14 January 1994.

## MEETING FOCUS

### Chemical and Biological Medical Treatment Symposium

In response to the need for further and continued global communication amongst the world's leading scientists in the area of chemical and biological defense, Battelle Memorial Institute and Applied Science and Analysis, Inc. (ASA), under the auspices of the Chemical Warfare/Chemical and Biological Defense Information Analysis Center (CBIAC), sponsored the Chemical and Biological Medical Treatment Symposium (CBMTS), held December 5-8, in Spiez, Switzerland. The symposium was hosted by the NC Laboratory; a Swiss Government owned and operated laboratory located in Spiez. Approximately 75 representatives from 24 countries attended.

The symposium was chaired by Dr. Brian Davey, Special Adviser to the South African Surgeon General, and co-chaired by Dr. Barbara Saunders-Price, Applied Sciences and Analysis, Inc.

There were eight separate sessions covering all aspects of chemical and biological medical treatment. They included: Medical Treatment I (chair: Prof. Balali-Mood - Iran; co-chair: Dr. Sohrabpour - Iran and Prof. Tryphonas - Canada), Medical Treatment II (chair: Prof. Gu - China; co-chair: Prof. Zhao - China and Dr. Wade - U.S.A.); Medical Treatment Research and Development (chair: Dr. Portmann - Switzerland; co-chair: Dr. Rubidge - England); Medical Delivery Systems (chair: Dr. Kratzer - Switzerland; co-chair: Mr. Monroe - U.S.A.); New Agents: Development (chair: Prof. Matousek - Czech Republic; co-chair: Dr. Erasmus - South Africa); New Agents: Treatment (Prof. Bajgar - Czech Republic; co-chair: Dr. Clement - Canada); Biological, Toxins, and Vaccines (chair: Prof. Geissler - Germany; co-chair: Dr. Sjostedt - Sweden and Dr. Prior - England); and Medical Aspects of Disarmament (chair: Dr. Parkes - Australia; co-chair: Dr. Lison - Belgium and Dr. Willems - Belgium).

Day one of the symposium opened with an introduction and overview of session topic areas. A 45 minute discussion of each topic area was presented by either the chair or co-chair. This introduction furnished the audience with a preview of what would be presented later during the week as well as highlighted some "hot" and/or controversial issues to be discussed during that particular session topic. Day two of the meeting covered sessions on Medical Treatment, Medical Treatment Research and Development, and Medical Delivery Systems. The medical treatment session highlighted data on the long term follow-up of mustard casualties with a primary focus on lung



Dr. Solomon Fadoju (Nigeria) reviewing a poster. (Photo by Janice Rhodes).

on New Agents (development and treatment), Biologicals, Toxins, and Vaccines,

discussions and exchange of scientific research. The final day of the symposium



Professor Jiri Matousek (Czech Republic) studying a poster presentation. (Photo by Janice Rhodes)



Dr. Brian Davey (South Africa) addressing the symposium attendees. (Photo by Janice Rhodes)



Left to Right: Dr. Cornelius Erasmus (South Africa), Mr. Richard Price (United States) and Mr. Brian Davey (South Africa) enjoying the wine and cheese party. (Photo by Janice Rhodes)



Professor Jiri Bajgar (Czech Republic) discussing his poster with a symposium attendee. (Photo by Janice Rhodes)

problems such as tracheal and bronchial stenosis (narrowing), bronchial infection and pneumonia. Day three featured sessions

and Medical Aspects of Disarmament. However, the highlight of this day was the Poster Session which promoted many

concluded with a summary of each session topic area.

[See Meeting Focus](#)

Continued On Page 12



## Meeting Focus

Continued From Page 11

### AUSA 1994 Annual Meeting

The Association of the United States Army (AUSA) held its 1994 Annual Meeting from October 14th through October 19th at the Sheraton Washington Hotel and Omni Hotel in Washington D.C. The theme of this meeting was "America's Army ... Into the 21st Century." Numerous AUSA activities, award ceremonies, chapter meetings and committee meetings were scheduled throughout the five day event. From Monday, October 17th through Wednesday October 19th, attendees could



General Gordon R. Sullivan, Army Chief of Staff was in attendance at the AUSA 1994 annual meeting. (Photo by Mary Jo Waters)

also view an impressive array of exhibits on some of the most comprehensive industrial developments in the military field. The exhibition halls of both hotels were filled to capacity with displays. Outdoor exhibits were set up at the loading dock of the Sheraton Washington Hotel.

The "Telepresence Surgery System" being presented and demonstrated by SRI International captured the attention and imagination of attendees with its potential for use in numerous civilian and defense



The 1994 AUSA Annual Meeting included numerous exhibits and displays of industrial developments in the Military Field. (Photo by Mary Jo Waters)

scenarios. General Gordon R. Sullivan, Army Chief of Staff, was in attendance at the AUSA meeting, and took the time to perform remote surgical procedures using the "Telepresence Surgery System." Using this system, surgeons in regional medical centers will be able to operate with precision on patients at remote locations. In combat scenarios, surgeons will be able to perform surgery from safe locations behind the lines. For this demonstration, the "patient" requiring surgery was in an ambulance outside the hotel. Telepresence surgery provides a high level of dexterity, allowing the surgeon to control all procedures being performed on a "real" patient.



General Sullivan performs remote surgical procedures on a simulated casualty using the "Telepresence Surgery System." (Photo by Mary Jo Waters)



Monitors show the remote procedures being performed by General Sullivan using the "Telepresence Surgery System." (Photo by Mary Jo Waters)

## Ongoing and Recent Activities

Continued From Page 3

451 Evaluate Lessons Learned During the CADNET Development and Recommend a Follow-On Program Plan.

USA/ERDEC

452 Analyze the Technical Feasibility for Foreign Nations to Modify Selected systems to Deliver Unconventional Munitions.

SENSITIVE

461 Provide Technical Support to ERDEC in Conducting the Eighth Annual International Simulant Workshop.

USA/ERDEC

470 Evaluate MEDTAG Requirements, Recommend Technical Alternatives, and Develop a Proof-of-Principle System.

USN/NHRC

490 Provide Technical Support to the ERDEC Alternatives to Animal Testing Symposium.

USA/ERDEC

499 Prepare an Overview of the USA/ERDEC Chemical Evaluation Laboratory.

USA/ERDEC

523 Provide Technical support to the ERDEC Hosted DDR&E CB Defense Program Science and Technology Symposium.

USA/ERDEC

### Underway

#### Task Description/Sponsor

511 Evaluate Biological Effluent Sampling and Analytical Equipment and Methods and Characterize Bioaerosols for Treaty Monitoring and Counterproliferation Purposes.

USAF/AFTAC

514 Evaluate the CW Survivability of the F-117 Aircraft when it is Operating in a CW Environment.

USAF/SM-ALC

515 Evaluate the Air Flow Characteris-

tics of Modular Collective Protection Equipment (MCPE) Gas/Particulate Filter Units Used in Collective Protection Applications.  
USN/NSWC

520 Evaluate Real Time Engineering and Acquisition Management Document Tracking System for CB Defense Programs.

USA/ERDEC

522 Evaluate USA CSM Operations Regulations and Existing Industry and Other Federal/State Standards on Hazardous Material and Develop a Cross Referenced Chemical Surety Guidebook.

USA/ERDEC

526 Evaluate AFMIC Medical, Scientific and Technological Documents, Format, Methods of Presentation; Recommend Improvements; and Design, Implement and Demonstrate Recommend Changes.

DIA/AFMIC

532 Scan and Archive Documents from the M6 Smoke Dispenser Development Program.

USA/ERDEC

533 Provide Technical and Analytical Support Regarding the JSLIST and other CBD Programs to TECOM and Dugway Proving Ground.

USA/TECOM

535 Acquire and Demonstrate Internet Tools to Support DTIC-AI and DTIC Scientific and Technical Information Collection and Dissemination Requirements.

DTIC

539 Evaluate the Effect of Storage on the Chemical Agent Resistance of the Navy Standard Chemical Protective Overgarment.

USN/NAVSEA

01 Develop a Comprehensive Source of F-117 Operational Guidance for Pre-Attack Preparations and Post Attack Operations in a CB Environment.

USAF/SM-ALC

03 Provide Technical and Administrative Support for ERDEC Research

Directorate Sponsored Conferences.

USA/ERDEC

04 Provide Technical, Engineering and Program Support to MARCORSYSCOM for their NBC Defense Program.  
USMC/MARCORSYSCOM

05 Evaluate Previous Logistics Supportability and MANPRINT Approaches for Smoke Grenade Launcher Programs to Determine the most Effective Concepts for Deployment of LVOSS.

USA/ERDEC

06 Provide Technical and Administrative Support to the 4th BiAnnual CB Technology and Intelligence Update Conference.

USN/NSWC

07 Develop a Master Plan for U.S. Navy and Marine Corps Aviation CB Survivability Requirements.

USN/NAWC

### CBIAC STATISTICS

**Total CBIAC documents accessible through DTIC DROLS:**

**Shared: 3,681<sup>1</sup> Unique: 2,850<sup>2</sup>**

**Total documents accessible through the CBIAC UDB: 22,499**

**Total new UDB acquisitions during First Qtr. FY95:**

**Acquired: 161**

**Reviewed: 0**

**Cataloged: 0**

**Total inquiries received during First Qtr. FY95:**

**Technical: 39**

**Informational: 30**

**Bibliographic: 78**

**Referral: 7**

**Total TATs awarded: <sup>3</sup>**

**Completed: 277 Ongoing: 58**

**Total newsletter subscribers: 2,124**

**1 Existing DTIC records appended with CBIAC terms**

**2 New DTIC records created by the CBIAC**

**3 Sum of TATs on old and new CBIAC contracts**

## Selected Technical Responses

This section of the newsletter contains selections of recent technical inquiries and responses on subjects we feel are of interest to the users. The information presented has been edited to conserve space. If you would like further detail, please contact Steven Jones at the CBIAC and reference the number indicated in parentheses.

Q: Is there any information on the effects of agents buried at sea with marine life?. (Reference: 95-0005)

A: Using the standard agents and their decomposition products in water the CBIAC User-Accessible Database (UDB) and the DTIC Defense Research Online System (DROLS) were searched for data involving environmental sampling, oceans, waterways, etc. The search results were then qualified with species of fish located near the area of concern to identify this information.

Q: What is the purity of chemical filled munitions taking into consideration that the munitions were filled over twenty years ago? (Reference: 95-0111)

A: The following is taken from an Information Paper published by the Chemical Weapons Treaty Office on the topic of approximate purity levels of the U.S. stockpile. (Reference: CB-018519).

The initial specifications for GB were a quality greater than 81 percent, if it were being filled in steel, and 93 percent, if filled in aluminum. VX minimum purity in both instances was 92 percent.

There was a fairly large lot-to-lot (and within lot) variation, but the following generalizations can be made:

- VX was normally better than GB (also more recently manufactured). The majority of VX measurements were in the high 80's and low 90's in the 1978-83 time frame, although some lots had dipped into the 70's.

- Bulk GB was generally poorer than most munitions lot samples, with values in the 70's and 60's. Most GB munition lots samples averaged in the low 80's. Most importantly, a large percentage of the GB munitions indicated that the stabilizer, either diisopropyl carbodiimide or (in earlier GB) tributyl amine was used up and the samples were acid.

- Agent deterioration as a generalization behaves as if it is first order (i.e., exponential) rather than a straight line.

Given the above, at present (1991) most VX should be in the mid to low 80's in purity, with some lots and/or individual samples expected to be badly deteriorated < 20 percent.

In terms of GB it is probable that given the relatively low levels in 1978-83, a significant portion is badly deteriorated, with the majority at < 50 percent and some lots < 20 percent. Solid formation and gelling should have occurred in a significant number of lots.

An assay should be made of selected Tooele lots to evaluate the veracity of these projections.



### Planning a Conference/ Symposium????

Let the CBIAC provide you with the technical and logistical support you need!

We offer a dedicated staff of technical and administrative personnel trained to support conferences, symposia, and small working group meetings in all areas of Chemical Warfare/ Chemical and Biological Defense. Currently the CBIAC supports several annual conferences, workshops, and symposia, both classified and unclassified, in the U.S. and abroad. The CBIAC offers the following support:

- Identification of Subject Matter Experts
- Solicitation of Keynote Speakers
- Mailing List consisting of over 5,000 names (national and international) within the CB Community
- Logistical/Administrative Support (invitation packages, technical agendas, correspondence packages, security issues, etc.)
- Technical Proceedings
- And Much More!

For further information contact: Janice Rhodes,  
Conference Coordinator, at (410) 676-0200





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For more information please phone, FAX, write, or E-Mail

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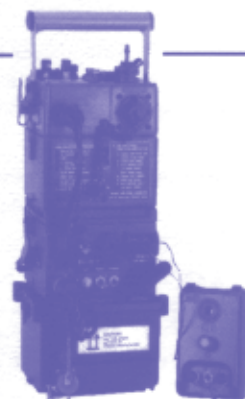
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Government agencies and private industry under contract to the Department of Defense can contact the CBIAC which serves as a center for the acquisition, compilation, analysis and dissemination of information relevant to chemical warfare and chemical and biological defense technology. The CBIAC staff is available to answer questions from 7:00 a.m. to 5:00 p.m, EST.

The CBIAC is located in Building E3330, Aberdeen ProvingGround-Edgewood Area, Maryland 21010.

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